



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/706,552	11/13/2003	Karl W. Terry	7124.023	6890
30589	7590	07/13/2004	EXAMINER	
DUNLAP, CODDING & ROGERS P.C.			ZIMMER, MARC S	
PO BOX 16370			ART UNIT	
OKLAHOMA CITY, OK 73113			PAPER NUMBER	

1712

DATE MAILED: 07/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/706,552

Applicant(s)

TERRY ET AL.

Examiner

Marc S. Zimmer

Art Unit

1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-35 is/are rejected.
- 7) ☒ Claim(s) 23 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Information Disclosure Statement

Applicant is advised that some of the U.S. patent documents have been crossed out only because the Examiner has duplicated them on the PTO 892 form. This is necessary only because, should the present case issue as a patent, references cited by the Examiner are given special designation on the face of the patent.

Applicant is advised that abstracts of foreign patents are not to be reported under the heading of "Foreign Patent Documents". Rather, they should be placed under the heading, "Other References". Indeed, an abstract is merely a summary of the contents of a document as viewed by someone other than the author of the original publication and, hence, does not necessarily accurately portray the actual teachings of said publication.

Claim Objections

Claim 23 is objected to because one of ordinary skill in the art will appreciate that "silica" and "colloidal silica" are generally not interchangeable as the latter has specific size/structure connotations. The Specification discloses colloidal silica in an identical amount hence Applicant is encouraged to amend claim 23 to recite colloidal silica as opposed to silica.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 29-34 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 29 recites a process of using a composition that is said to comprise *both* of 0.1 to 70 weight percent of silica and 0.1 to 70 parts by weight of colloidal silica where silica is apparently to be distinguished from colloidal silica. While the Specification supports the incorporation of colloidal silica, it does not appear to support the inclusion of silica that is different from colloidal silica.

Double Patenting

Claims 1-28 and 35 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-28 and 35 respectively of copending Application No. 10/706551. This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

The subject matter claimed in the instant application is fully disclosed in the referenced copending application and would be covered by any patent granted on that copending application since the referenced copending application and the instant application are claiming common subject matter. In particular, the method disclosed in each of claims 1-28 and 35 of the copending application could only be employed to make a single product, said product being that disclosed in claims 1-28 and 35 of the instant application. A patentable

Art Unit: 1712

distinction in a process of making and a product made by the process cannot be demonstrated if (i) the process is an obvious way of making the product and (ii) the process can only be employed to make that product alone. Indeed, the litmus test for restriction had the method and product been claimed in the same application would have been a question of whether the method could be exploited to prepare another product. Clearly, this is not the case hence the Examiner's assertion of obviousness-type double patenting is justified.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sawaragi et al., U.S. Patent # 5,314,947 in view of Takeshita et al., U.S. Patent # 6,057,039. Sawaragi discloses a composition for coating plastic materials offering a desirable combination of high refractive index and scratch resistance comprising:

(i) 100 parts by weight of an epoxy-functionalized silane, or partial

condensate, adhering to the formula $R^1R^2_nSi(OR^3)_{3-n}$

wherein R

is an epoxyalkyl group, R^2 symbolizes a (un)halogenated alkyl-

or alkenyl radical, and "n" is an integer of zero to two,

(ii) 0 to 100 parts by weight of a second organosilicon

compound,

or partial condensate thereof, represented by the formula

$R^4R_q^2Si(OR^3)_{4-p-q}$ wherein R^4 is one of the substituent

groups

outlined in column 2, lines 24-30,

(iii) 0 to 130 parts of *at least one* metal oxide sol selected

from

those based on aluminum, tin, or titanium,

(iv) 0.25 to 30 parts by weight of a polycarboxylic acid or

anhydride

derivative such as those named in column 3, lines 14-36,

and

(v) 0.01 to 30 parts of a condensation catalyst.

As optional components, an acid hydrolysis catalyst, an organic solvent diluent, and a leveling agent, are particularly identified in column 4, lines 28-47. In column 9, it is contemplated that the aforementioned composition may be applied to a lens, dried, and cured at elevated temperature. There is not, however, any mention of a disilane hence Sawaragi does not fully anticipate the claim.

Takeshita, like Sawaragi, describes a coating composition for rendering plastic articles resistant to a host of different destructive forces including heat, abrasives, and chemical agents. In addition to these attributes, the composition disclosed by Takeshita also possesses exemplary dyeing characteristics. Among the ingredients contemplated therein are materials equivalent to components (i), (iii), and (v) from the '947 reference. Additionally, Takeshita advocates the incorporation of a disilane conforming to the formula provided in column 2, lines 43. A more detailed description of these compounds is provided in column 4, lines 22-60. According to column 5, lines 18-25, the main benefits realized upon adding this compound are faster cure rates and a stronger affinity for dyes in the overall composition. In view of these expected improvements, it would have been obvious to modify Sawaragi's invention by adding a disilane.

It is acknowledged that, insofar as not all of the epoxy-functionalized silane, the metal oxide colloid, and the disilane are disclosed in the same reference, the ratio reported in claim 1 is, of course, not taught in either reference. However, Applicant has not demonstrated any particular criticality for this limitation. Indeed, the Specification states that the invention is suitably practiced using varied quantities of each of the aforementioned materials. Furthermore, Sawaragi and Takeshita expressly delineate the role of each of these compounds and the effect imparted by their inclusion. Accordingly, one of ordinary skill is capable of adjusting the amounts of each component as a matter of routine experimentation to arrive at a composition having the preferred balance of properties. "Where the general conditions of a claim are disclosed in

Art Unit: 1712

the prior art, discovering the optimum or workable ranges involves only routine skill in the art (ie. does not require undue experimentation)." *In re Aller*, 105 USPQ 233. "Discovering an optimum value of a result effective variable involves only routine skill in the art." *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Allowable Subject Matter

Claims 1-22, 24-28, and 35 would be allowable if Applicant were able to overcome the double patenting rejection set forth herein. Claims 29-34 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, first paragraph, set forth in this Office action.

Each of the disilanes contemplated by Takeshita is required to feature at least one epoxide ring or a carbonate group in the fragment bridging the two silicon atoms. Insofar as the combination of Sawaragi and Takeshita represents, in the Examiner's view, the closest prior art and none of the embodiments of R¹² contain one or more of these groups claims 1-22 are allowable over the art.

As for the allowability of claims 24-35, while the prior art repeatedly teaches the addition of colloidal silica as a means of improving the abrasion resistance of a mixture, there is nothing in Sawaragi that indicates that their composition is in need of further improvements with respect to this property. In any case, Nagashima et al., U.S. Patent # 5,013,788 and January, U.S. Patent # 4,355,135 are offered as evidence that it was already well-known that this property could be enhanced by adding colloidal silica.

Art Unit: 1712

Another reference of interest is Yajima, U.S. patent # 5,366,545, which discloses a composition and process of using the same that mirrors the instant invention in nearly every respect with the notable exception that a carboxylic acid/anhydride is not mentioned. The prior art does not, however, specifically motivate one of ordinary skill to modify Yajima's invention in the manner necessary to arrive at the present one. Likewise, Iryo et al., U.S. Patent # 5,789,476 teaches a very similar invention that differs primarily in that it does not describe a compound corresponding to the disilane.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc S. Zimmer whose telephone number is 571-272-1096. The examiner can normally be reached on Monday-Friday 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on (571)272-1302. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1712

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

July 9, 2004

A handwritten signature in cursive script, appearing to read "Marc Zimmer".

Marc Zimmer
AU 1712